



VOLUME I.

JULY, 1914

NUMBER 9

R. Alston Brown

If the estimate is greater than  
the appropriation have the building  
figured for Atlantic Terra Cotta.



New York City's Terra Cotta Line

# ATLANTIC TERRA COTTA

PRINTED MONTHLY FOR ARCHITECTS



*"Leo," Zodiac emblem executed in colors for  
the University of Texas Library;  
Cass Gilbert, Architect*

ATLANTIC TERRA COTTA COMPANY  
1170 BROADWAY, NEW YORK

ATLANTA TERRA COTTA COMPANY, THIRD NATIONAL BANK BUILDING, ATLANTA, GA.



White Shoal Lighthouse

Northern end of Lake Michigan

Designed by Major W. V. Judson, U. S. A. Lighthouse Engineer

Entirely of white matt glazed Atlantic Terra Cotta

Atlantic Terra Cotta Co., 1170 Broadway, New York

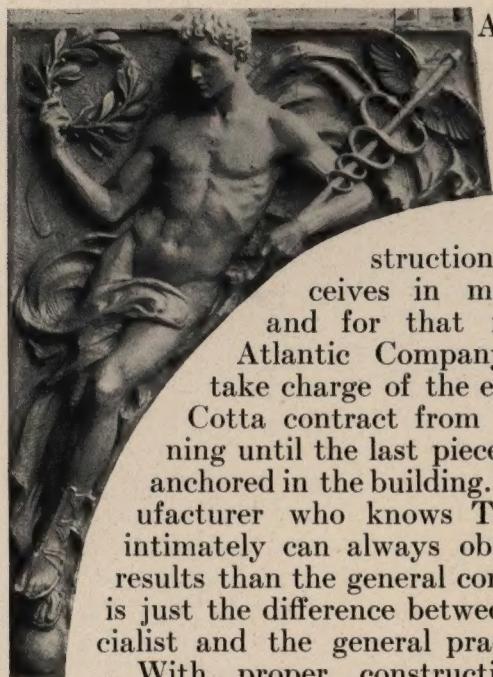
# ATLANTIC TERRA COTTA

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## Correct Terra Cotta Construction



ATLANTIC TERRA COTTA should receive the same care in construction that it receives in manufacture, and for that reason the Atlantic Company likes to take charge of the entire Terra Cotta contract from the beginning until the last piece is set and anchored in the building. The manufacturer who knows Terra Cotta intimately can always obtain better results than the general contractor; it is just the difference between the specialist and the general practitioner.

With proper construction glazed Terra Cotta, will stand extreme exposure without deterioration.

The greatest agent of deterioration is water, and water works in three ways:—(1) in a smoky atmosphere it reacts with accumulated soot to form sulphurous and sulphuric acid; (2) inferior mortar is absorbent and swells under the action of water; (3) accumulated moisture in a freezing temperature will expand with sufficient force to shatter Terra Cotta or any other structural material.

Terra Cotta glazes are formed by chemical reaction under the influence of tremendous temperature; they are proof against ordinary atmospheric acids in normal temperature and absolutely waterproof. *Consequently, the only way that water can affect glazed Atlantic Terra Cotta is through the mortar in the joints and the concrete or masonry backing.*

Mortar of inferior quality admits water, and becomes inert as a binder if the water contains acid. Even if the water is comparatively pure there is danger of swelling and ultimate disintegration of the mortar, and disintegration may lead to settlement of the walls.

The voids in the Terra Cotta pieces should be filled solid with brick or concrete to prevent the accumulation of moisture. The concrete should be of good grade for if water percolates through the joints it will reach the concrete.

If the concrete is not properly prepared or of the wrong composition, water will cause expansion.

Any hard, well burned common brick will do for masonry backing.

Plaster of Paris should never be used in mortar, even in small quantities, to facilitate setting; it makes the mortar porous and liable to expansion, and the expansion may have sufficient force to shatter the Terra Cotta pieces. Ultimate disintegration of mortar that contains Plaster of Paris is inevitable.

Salt should never be used, but for a different reason. It admits water but the danger lies not so much in expansion as in the fact that salt is soluble and leaches out. The salt crystals penetrate the Terra Cotta until they reach the impervious glaze. As the glaze is impenetrable the cumulative force of crystallization is sometimes sufficient to rupture the face of the Terra Cotta. The same action may result if the cement is of poor quality and contains soluble saline impurities.

The following mortar formula is thoroughly satisfactory:

3 parts non-staining cement  
8 parts sand  
1 part lime, *thoroughly slaked*.

2% of one part of a good waterproofing compound might be used to advantage but is not essential except for pointing mortar. The sand for pointing mortar should be clean and white.

A good concrete formula is:

1 part cement  
2 parts sand  
5 parts crushed stone

2% of one part of waterproofing should be used if the concrete is intended for filling the voids.

Of course, mortar and concrete should be mixed under proper supervision. The lime must be thoroughly slaked—if it is burned it becomes inert—and the cement must be perfectly calcined. An even mixture is necessary, and for this reason power mixers are advisable.

*Headpiece:—Life size figure of Mercury, executed in gray Atlantic Terra Cotta for exterior of the Pittsburgh Athletic Club. Janssen & Abbott, Architects.*

Particular care should be given to filling the joints on wash courses, especially large cornices, and the joints themselves should be ordinary butt or raised joints. Roll or other covered joints prevent proper filling and pointing, and are apt to be broken in handling.

Generally it is advisable to flash wash courses with copper, particularly in a cold climate. The flashing should be secured by lead plugs on the nib of the wash member, placed in the joints between the pieces of Terra Cotta or in plug holes provided for the purpose. Securing flashing by plugs is better than fastening in a raglet, because the raglet will have to be filled with some composition. If it is not completely filled water will collect and oxidation of the metal result, and sometimes the very compositions used for filling raglets corrode and destroy the flashing instead of protecting it!

Iron anchors also require some attention. Ordinarily they are fully protected by being imbedded in the masonry or concrete backing, but to insure complete protection from rust they should be coated with some non-corrosive paint.

Undoubtedly, the foregoing sounds rather complicated, but analysis will show that Terra Cotta requires only reasonable care, and in the vast majority of cases there has been no trouble.

But trouble may not develop until some months or even several years after the completion of the work, long after the architect has signed the general contractor's release. The Terra Cotta manufacturer can generally prove that the fault is not with the Terra Cotta, but all this takes time and is useless, anyway. It reacts to the disadvantage of all concerned, perhaps the owner and the architect most of all, no matter who is at fault.

When the Atlantic Company erects the Terra Cotta the chances that trouble will develop are negligible, and the Atlantic Company *takes what chances there are*. If anything should go wrong there is no shifting of fault; it is easily placed.

Furthermore, a general contractor may have gone out of business long before the trouble develops. The Atlantic Company is in business to stay, and is thoroughly responsible morally and financially.



Pier Buildings, Atlantic City, N. J.

Simon & Bassett, Architects

Decorative features of Atlantic Terra Cotta, gray and polychrome



Pier Buildings, Atlantic City, N. J.

Simon & Bassett, Architects



Pier Buildings, Atlantic City, N. J.

Simon & Bassett, Architects

On the Pier Buildings Atlantic Terra Cotta was used more for its decorative than for its practical qualities, and it is both elaborately modeled and brilliantly colored. The fact that it will not discolor or deteriorate in the salt air, or even weather to any marked extent, was a secondary though material consideration. The effect is cheerful and helps to create a carnival spirit without the garish crudity of ordinary beach resort methods. The basic tone of gray insures refinement and "contrasts harmoniously" with the strong faience colors.

Atlantic Terra Cotta Co., 1170 Broadway, New York



Pier Buildings, Atlantic City, N. J.

Simon & Bassett, Architects

Decorative features of Atlantic Terra Cotta, gray and polychrome



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Decorative features of Atlantic Terra Cotta, gray and polychrome



Natatorium, Pittsburgh, Pa.

Grosvenor Atterbury, Architect

Pittsburgh Building Co., Builders

Side walls, ceiling and modeled gallery railing of Atlantic Terra Cotta in white, yellow and two shades of green



Pittsburgh Athletic Club Swimming Pool, Pittsburgh, Pa.

Janssen & Abbott, Architects

Henry Shenk Co., Builders

Side walls, ceiling and modeled gallery railing of Atlantic Terra Cotta in cream white and green

The practical quality of sanitary cleanliness and the decorative possibilities of Atlantic Terra Cotta combine to make it an excellent material for the interior of a swimming pool room. The same general plan is followed for both the pools illustrated. The side walls are smooth and free from modeling so that the surface can be washed down very readily. Bands of light cream white alternate with green in the Athletic Club, and the same color scheme is followed in the delicate tracery modeling of the gallery railing. In the Natatorium bands of light yellow alternate with pure white for the side walls and roof arches, while the gallery is worked out in white and a sparkling green that matches the water in the pool most surprisingly in color and tone value. The impression of cleanliness and coolness is very striking.

## Cost of Atlantic Terra Cotta

Atlantic Terra Cotta is not a stock material; every piece is made especially for the building in which it is to be used and is intended to occupy a certain place in that building.

To arrive at the cost it is necessary to figure the Architect's plans and specifications, and to obtain a definite estimate the Architect should submit the following drawings: floor plans and elevations drawn to scale, sections showing projections, and sketch details. The elevations should indicate the character and the amount of modeling.

Unless the whole building is to be Terra Cotta the Terra Cotta members should be clearly marked. The color and surface finish should also be noted, and if more than one color is used the polychromatic features should be indicated.

The Architect may either inspect the models at the Atlantic plant or approve them from photographs that the Atlantic Company supplies.

On all contracts complete construction drawings, subject to the Architect's approval, are made for the use of the builder. The construction drawings show the location of every piece and its attachment to the frame of the building. Accompanying the drawings is a complete schedule of the necessary iron rods and anchors for the iron contractor's bid.

The main office of the Atlantic Terra Cotta Company is at 1170 Broadway, New York, and requests for information of any kind or notification of plans to be estimated should be sent to the main office or to the nearest one of the representatives listed below.

### SALES DEPARTMENT

S. S. Whitehurst, Vice-President

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			F. G. Evatt 1235 Fulton Building

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New Orleans, La.	Ole K. Olsen	823 Perdido Street		
Norfolk, Va.	G. S. Friebus	Carpenter Building		
		Winnipeg, Manitoba		
		Waite-Fullerton Co.		
		402 Builders' Exchange		

### ATLANTIC FACTORIES

Plant 1. Tottenville, N. Y.

Plant 3. Rocky Hill, N. J.

Plant 2. Perth Amboy, N. J.

Plant 4. Perth Amboy, N. J.

### SOUTHERN BRANCH

Atlanta Terra Cotta Company

514 Third National Bank Building, Atlanta, Ga.

Works at East Point, Ga.

Six miles from Atlanta.

Atlantic Terra Cotta can be used independently or in connection with other materials—contrasting or harmonizing.



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Atlantic Terra Cotta is weather-  
proof, fireproof and permanently  
durable.



New York City's Terra Cotta Line

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*"Scorpio;" Zodiac emblem executed in colors for  
the University of Texas Library;  
Cass Gilbert, Architect*

ATLANTIC TERRA COTTA COMPANY  
1170 BROADWAY, NEW YORK

ATLANTA TERRA COTTA COMPANY, THIRD NATIONAL BANK BUILDING, ATLANTA, GA.



Kresge Building, Detroit

Albert Kahn, Architect

Jas. L. Stuart, Builder

Entirely of Atlantic Terra Cotta in lustrous cream glaze from belt course at second story level to roof, with exception of the piers in glazed brick. The name panel is dark yellow Terra Cotta.

Atlantic Terra Cotta Co., 1170 Broadway, New York

# ATLANTIC TERRA COTTA

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## The Cleanliness of Glazed Atlantic Terra Cotta



in writing on the effect of smoke on natural materials, lists the effects under two heads in his conclusion:

"(1) The soiling of the surface, so that in the course of a few months all stone takes on the same gray, grimy color. This means either the loss of all artistic effect that may have been obtained by color contrast, etc., or the frequent cleaning of the building, which is an additional expense and at the same time aids in the destruction of the stone.

"(2) The actual destructive action on all stones by the acid products of the combustion of the coal. This is especially marked on any stone containing calcium or magnesium carbonates in larger or smaller quantities.\* Although there is some action on other constituents of the building stones it is so slow in most cases as to be hardly noticeable."

Further on he says, "Special materials, such as glazed brick, Terra Cotta, etc., which admit of being readily cleaned, are used more in smoky towns than in those free from smoke." This is so with regard to the glazed material, only; it does not consider Terra Cotta with other surface finish. In New York, for example, which is entirely free from the soft coal smoke nuisance, there is as large a proportion of Terra Cotta used as in any other city. The standard finished material, gray, red, brown, etc., which is less easily cleaned than the glazed, can be and is used with very good effect.

The Kresge Building, in Detroit, is made of

**I**N 1913 the Mellon Institute of Research, in connection with the University of Pittsburgh, printed a report covering the effect of smoke on building materials. Raymond C. Benner, Ph.D.,

the two cleanest building materials—glazed brick and glazed Atlantic Terra Cotta. In this case the lustrous glaze is used instead of the more usual matt, for while the matt surface is equally impervious and almost as easy to clean, the lustrous glaze gives less foothold to soot and dust. Nothing stronger than soap and water is necessary to clean down either matt or lustrous glazed Atlantic Terra Cotta, and the soap should be non-abrasive.

In clean cities the matt glaze is ordinarily preferred to the lustrous because of its softer tone, except in light courts for maximum reflection of light, and in buildings such as bakeries and dairies, and the interiors of railway stations, etc., where maximum sanitary cleanliness is desired. Both surfaces are equally unaffected by the acids of a smoke laden atmosphere.

Atlantic lustrous glaze has a clear, transparent overslip like plate glass that gives it all the refinement of porcelain; in no way does it resemble paint. When it reflects the horizontal rays of the sun the effect is dazzling in the extreme.

There is another feature of glazed Atlantic Terra Cotta construction worthy of serious consideration, and that is that a towering facade of white or cream Terra Cotta, either matt or lustrous glaze, disseminates light throughout the immediate neighborhood. This effect is easily recognized in the case of the thirty-two story Liberty Tower, of matt white Terra Cotta, in New York, and the fifty-seven story facade of the Woolworth Building, in matt cream.

If the use of glazed Terra Cotta was universal the streets of American city business districts would be comparatively light and cheerful instead of seeming like canyons in semi-darkness.

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*Headpiece is a medallion from the Pittsburgh Athletic Club, executed in gray Terra Cotta for the Architects, Janssen & Abbott.*

\* Limestones. Dolomitic sandstones. Sandstones with a calcareous cementing material.

## Structural Substitution



The Yale Club, New York

James Gamble Rogers, Architect      Marc Eidlitz & Son, Builders  
Window trim and entablature gray Atlantic Terra Cotta.

ATLANTIC Terra Cotta may be used in many little construction subterfuges that are entirely justifiable on the grounds of increased structural efficiency and decreased cost.

An instance of this kind came to attention in connection with the new twenty-story Yale Club now being erected in New York. Above the stone base the shaft is of rough face brick with gray Terra Cotta trim, surmounted by a Terra Cotta entablature. The actual construction of a typical window is shown in Figure 1; the lintels have either keys of Terra Cotta or both keys and skew blocks, and the sills are of Terra Cotta with brick aprons.

To complete the flat lintels with brick it was, of course, necessary to grind every brick to the proper skew angle, and as the bricks were very hard the process was long, tedious and expensive. The fact that only about one mason in ten is competent to set an original brick lintel or "Jack arch" added to the difficulty, and because the supporting L iron must of necessity be exposed the dependability of construction was somewhat impaired.

A suggested improvement is shown in Figure II. The space occupied by brick in actual construction is taken by Terra Cotta voussoirs matching the brick exactly in color and texture, but made in larger pieces and with false brick joints. The false joints are incised to a depth of  $5/8$  in. and roughened so that the mortar would hold. A great number of pieces could be pressed out of one set of moulds, any mason could set them, and the L iron would be completely protected. The additional expense of Terra Cotta over brick would be more than covered by the elimination of grinding and setting expense, not only in time and convenience but in actual cost.

In the case of the sills the same structural difficulty did not occur. The advantages of making the apron as well as the sill of Terra Cotta would be convenience in setting and a neater result.

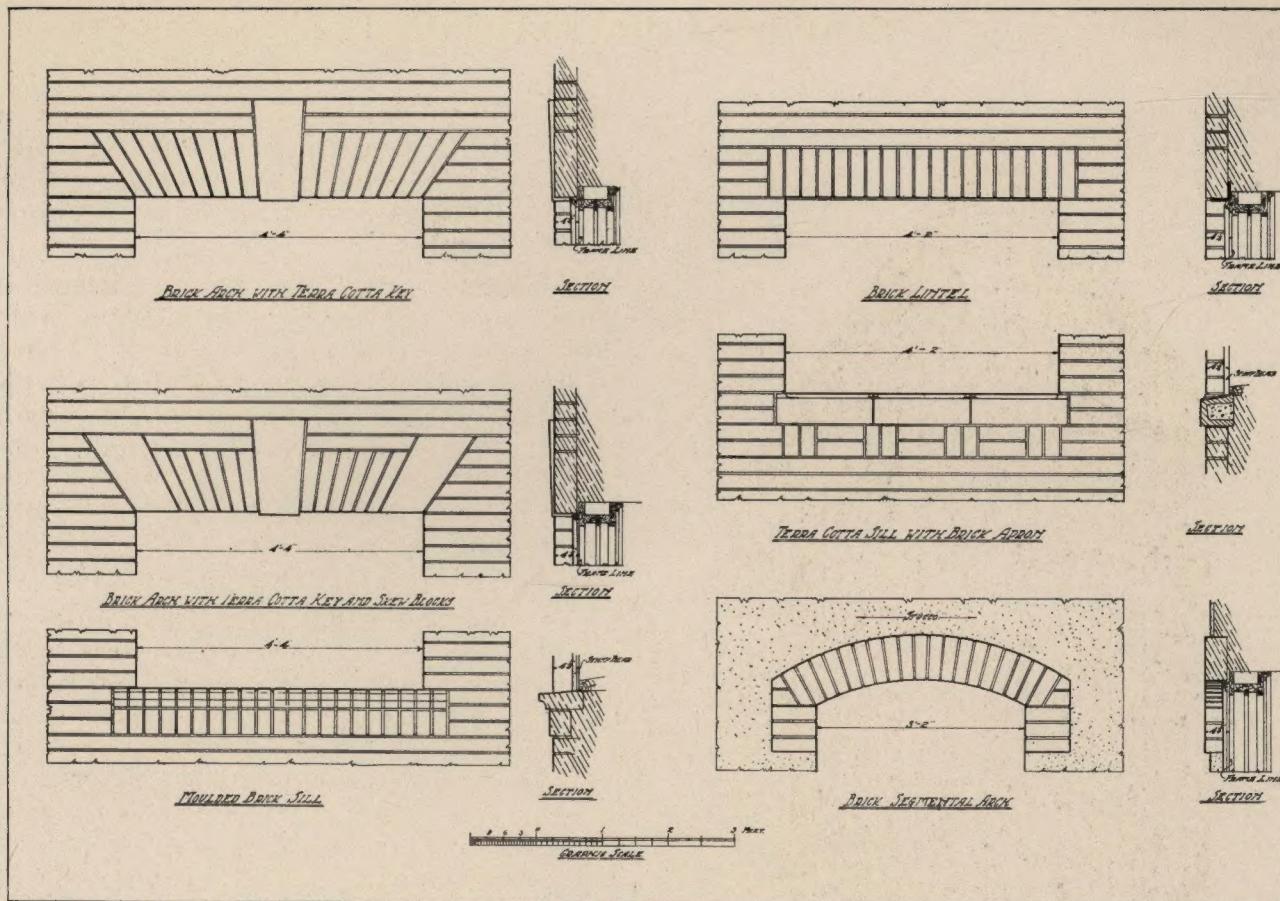


Fig. I

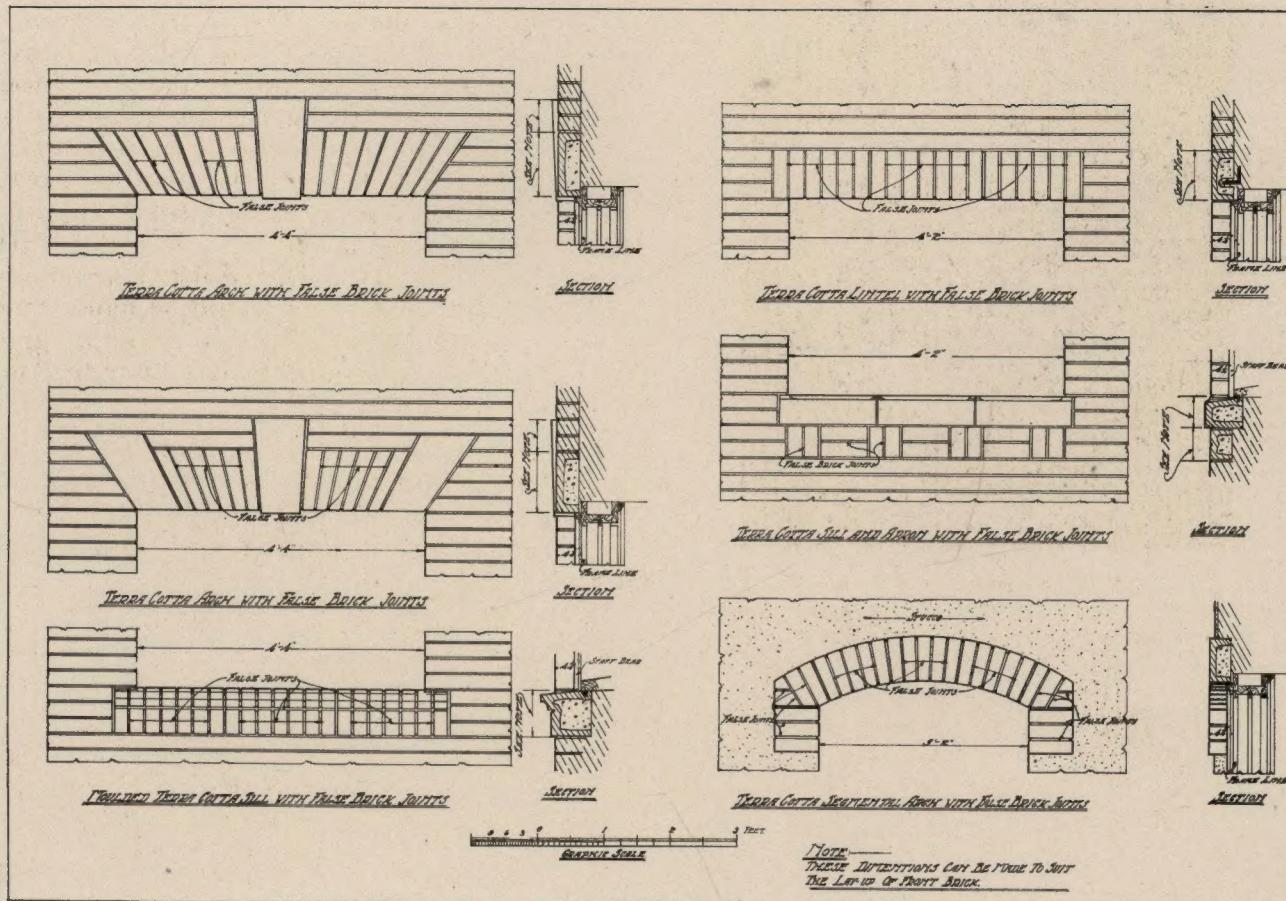


Fig. II



General Electric Co., Buffalo, New York  
Esenwein & Johnson, Architects      John Gill & Sons, Builders  
Entirely of white matt glaze Atlantic Terra Cotta from sidewalk to apex.

Atlantic Terra Cotta Co., 1170 Broadway, New York

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